C 31888 (Pages 2) Name.....

Reg. No.....

FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2007

EC 2K 406—ELECTRONIC INSTRUMENTATION

Time : Three Hours Maximum : 100 Marks

I. (a) Define (1) Accuracy ; (2) Precision.

(b) Give an account on 'Types of Ammeters'.

(c) State Piezo electric effect. Explain it.

(d) Explain the principle of transducer for flow measurement.

(e) State the merits and demerits of Electronic LCR meter.

(f) Compare digital storage oscilloscope with simple CRO.

(g) Draw a neat sketch of Digital frequency counter. Explain its advantages.

(h) Explain the principles of Logic analyzer with a simple sketch.

(8 × 5 = 40 marks)

II. (a) Draw a neat sketch of digital multimeter. Explain its principle of operation in detail.

Or

(b) Draw a neat sketch of electronic voltmeter. Explain its basic principle in detail.

III. (a) Write short notes on :

(i) Thermistor.

(ii) Photoelectric transducer.

(iii) Piezoelectric transducer.

Or

(b) (i) Explain the need for Ideal transducers.

(ii) Explain the transducers system for pressure measurement in detail.

IV. (a) Draw a neat sketch of digital storage Oscilloscope. Explain its principle of operation in detail.

Or

(b) Write short notes on :

(i) Power meter.

(ii) Q meter.

(iii) Electronic LCR meter.

Turn over

V. (a) Describe in detail the principle and applications of time interval counter with neat sketches.

Or

(b) Explain the principle of Microprocessor based Instrumentation systems.

(4 × 15 = 60 marks)